

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): An image processing apparatus for synthesizing a source image and a target image by positioning the target image in a designated synthesis area in the source image, comprising:

a search part searching coded data of the source image per predetermined independently processable block for an objective block corresponding to the designated synthesis area; ~~and~~

an objective block synthesis part synthesizing detected coded data of the objective block of the source image and coded data of the objective block of the target image, the coded data being encoded in accordance with a JPEG 2000 standard;

an encoder encoding image data into coded data by performing two-dimensional wavelet transform, quantization, and encoding on the image data in accordance with the JPEG 2000 standard; and

a decoder decoding the coded data into the image data by performing inverse two-dimensional wavelet transform, dequantization, and decoding on the coded data in accordance with the JPEG 2000 standard

~~wherein the coded data are encoded in accordance with a JPEG 2000 standard.~~

Claims 2-3 (Canceled).

Claim 4 (Currently Amended): The image processing apparatus as claimed in claim [[3]] 1, wherein the objective block synthesis part comprises:

an objective image reconstruction part using the ~~decoding part~~ decoder to decode the coded data of the objective block of the source image into image data of the objective block

of the source image and the coded data of the objective block of the target image into image data of the objective block of the target image;

an objective image synthesis part synthesizing the decoded image data of the objective block of the source image and the decoded image data of the objective block of the target image; and

an objective image re-encoding part using the ~~encoding part~~ encoder to encode the synthesized image data of the objective block into synthesized coded data again and replacing the original coded data of the objective block of the source image with the synthesized coded data.

Claim 5 (Currently Amended): The image processing apparatus as claimed in claim [[3]] 1, wherein the objective block synthesis part comprises:

an objective wavelet coefficient reconstruction part using the ~~decoding part~~ decoder to perform the two-dimensional wavelet transform on the coded data of the objective block of the source image and the coded data of the objective block of the target image, thereby reconstructing a wavelet coefficient of the objective block of the source image and a wavelet coefficient of the objective block of the target image;

an objective wavelet coefficient synthesis part synthesizing the reconstructed wavelet coefficient of the objective block of the source image and the reconstructed wavelet coefficient of the objective block of the target image; and

an objective wavelet coefficient re-encoding part using the ~~encoding part~~ encoder to encode the synthesized wavelet coefficient of the objective block into synthesized coded data again and replacing the original coded data of the objective block of the source image with the synthesized coded data.

Claim 6 (Original): The image processing apparatus as claimed in claim 1, wherein the block comprises a tile having header information.

Claim 7 (Original): The image processing apparatus as claimed in claim 1, wherein the block comprises a precinct.

Claim 8 (Original): The image processing apparatus as claimed in claim 1, wherein the block comprises a codeblock.

Claim 9 (Currently Amended): The image processing apparatus as claimed in claim [[3]] 1, wherein the objective block synthesis part, when at least one of the source image and the target image is a color image, comprises a color image processing part providing weights to a luminance signal component and a color difference signal component of the source image so that a luminance signal component of a synthesized image has a smaller quantization step size than a color difference signal component thereof does.

Claim 10 (Original): The image processing apparatus as claimed in claim 1, further comprising an output part outputting synthesized coded data to an exterior thereof.

Claim 11 (Currently Amended): An image reading apparatus, comprising:
a photoelectric conversion element reading an image and generating image data from the image;
a coding part encoding the image data into coded data and decoding the coded data into the image data in accordance with a JPEG 2000 standard;
a storage part maintaining coded data; and

an image processing apparatus for synthesizing a source image and a target image by positioning the target image in a designated synthesis area in the source image, comprising: a search part searching coded data of the source image per predetermined independently processable block for an objective block corresponding to the designated synthesis area; ~~and~~ an objective block synthesis part synthesizing detected coded data of the objective block of the source image and coded data of the objective block of the target image, the coded data being encoded in accordance with a JPEG 2000 standard; an encoder encoding image data into coded data by performing two-dimensional wavelet transform, quantization, and encoding on the image data in accordance with the JPEG 2000 standard; and a decoder decoding the coded data into the image data by performing inverse two-dimensional wavelet transform, dequantization, and decoding on the coded data in accordance with the JPEG 2000 standard,

wherein the storage part maintains at least one of coded data encoded from the source image and coded data encoded from the target image.

Claim 12 (Currently Amended): An image forming apparatus, comprising:

an image reading apparatus, comprising: a photoelectric conversion element reading an image and generating image data from the image; a coding part encoding the image data into coded data and decoding the coded data into the image data in accordance with a JPEG 2000 standard; a storage part maintaining coded data; and an image processing apparatus for synthesizing a source image and a target image by positioning the target image in a designated synthesis area in the source image, comprising: a search part searching coded data of the source image per predetermined independently processable block for an objective block corresponding to the designated synthesis area; ~~and~~ an objective block synthesis part synthesizing detected coded data of the objective block of the source image and coded data of

the objective block of the target image, the coded data being encoded in accordance with a JPEG 2000 standard; an encoder encoding image data into coded data by performing two-dimensional wavelet transform, quantization, and encoding on the image data in accordance with the JPEG 2000 standard; and a decoder decoding the coded data into the image data by performing inverse two-dimensional wavelet transform, dequantization, and decoding on the coded data in accordance with the JPEG 2000 standard, wherein the storage part maintains at least one of coded data encoded from a source image and coded data encoded from a target image; and

a printer engine forming an image on a paper based on image data decoded from output coded data of the image reading apparatus by the coding part.

Claim 13 (Currently Amended): A computer-readable recording medium for storing a program to cause a computer of an image processing apparatus to execute a procedure of processing an image wherein the image processing apparatus is for synthesizing a source image and a target image by positioning the target image in a designated synthesis area in the source image, the procedure comprising:

a search function searching coded data of the source image per predetermined independently processable block for an objective block corresponding to the designated synthesis area; and

an objective block synthesis function synthesizing detected coded data of the objective block of the source image and coded data of the objective block of the target image, the coded data being encoded in accordance with a JPEG 2000 standard;

an encoding function encoding image data into coded data by performing two-dimensional wavelet transform, quantization, and encoding on the image data in accordance with the JPEG 2000 standard; and

a decoding function decoding the coded data into the image data by performing inverse two-dimensional wavelet transform, quantization, and encoding on the image data in accordance with the JPEG 2000 standard; and

a decoding function decoding the coded data into the image data by performing inverse two-dimensional wavelet transform, dequantization and decoding on the coded data in accordance with the JPEG 2000 standard

~~wherein the coded data are encoded in accordance with a JPEG 2000 standard.~~

Claims 14-15 (Canceled).

Claim 16 (Currently Amended): The computer-readable recording medium as claimed in claim [[15] 13], wherein the objective block synthesis function comprises:

an objective image reconstruction function using the decoding function to decode the coded data of the objective block of the source image into image data of the objective block of the source image and the coded data of the objective block of the target image into image data of the objective block of the target image;

an objective image synthesis function synthesizing the decoded image data of the objective block of the source image and the decoded image data of the objective block of the target image; and

an objective image re-encoding function using the encoding function to encode the synthesized image data of the block into synthesized coded data again and replacing the coded data of the block of the source image with the synthesized coded data.

Claim 17 (Currently Amended): The computer-readable recording medium as claimed in claim [[15]] 13, wherein the objective block synthesis function comprises:

an objective wavelet coefficient reconstruction function using the decoding function to perform the two-dimensional wavelet transform on the coded data of the objective block of the source image and the coded data of the objective block of the target image, thereby reconstructing a wavelet coefficient of the objective block of the source image and a wavelet coefficient of the objective block of the target image;

an objective wavelet coefficient synthesis function synthesizing the reconstructed wavelet coefficient of the objective block of the source image and the reconstructed wavelet coefficient of the objective block of the target image; and

an objective wavelet coefficient re-encoding function using the encoding function to encode the synthesized wavelet coefficient of the block into synthesized coded data again and replacing the coded data of the block of the source image with the synthesized coded data.

Claim 18 (Original): The computer-readable recording medium as claimed in claim 13, wherein the block comprises a tile having header information.

Claim 19 (Original): The computer-readable recording medium as claimed in claim 13, wherein the block comprises a precinct.

Claim 20 (Original): The computer-readable recording medium as claimed in claim 13, wherein the block comprises a codeblock.

Claim 21 (Currently Amended): The computer-readable recording medium as claimed in claim ~~[[15]]~~ 13, wherein the objective block synthesis function, when at least one of the source image and the target image is a color image, comprises a color image processing function providing weights to a luminance signal component and a color

difference signal component of the source image so that a luminance signal component of a synthesized image has a smaller quantization step size than a color difference signal component thereof does.